G. INDUSTRY PRESENTATIONS: FUEL CELL MARKETS

1. Carl Miller, Delphi Automotive Systems
2. Nguyen Q. Minh, Honeywell
3. William P. Schweizer, McDermott Technology, Inc.

DELPHI

Automotive Systems

The Evolution of Delphi

DELPHI

Automotive Systems

General Motors Corporation

Global Automotive Operations

Hughes Electronics

GMAC

Spin-Off May 28, 1999

DPH Listed NYSE

- 1900s: 90 years + of history as the in-house supplier to GM
- 1988: ACG Worldwide Group structure created
- 1994: ACG Worldwide established as separate business sector
- 1995: ACG Worldwide became Delphi Automotive Systems
- 1998: Delphi incorporated as a subsidiary
- 1999: Delphi Initial Public Offering; "DPH" on NYSE
- 1999: Delphi becomes a totally independent company

Mission

DELPHI Automotive Systems

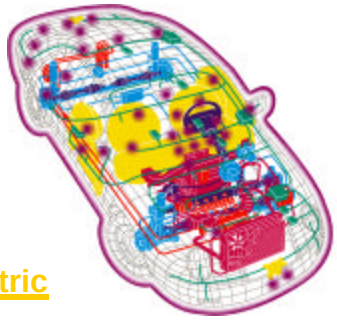
- Global Automotive Systems Supplier With Component Excellence
- Passionate Pursuit of Customer Satisfaction Through Technology, Quality, Cost, Responsiveness and Attitude
- Grow Revenue Across a Diversified Customer Base
- Increase Stakeholder Value Through Revenue Growth and Superior Returns
- Create an Environment Where Every Employee Can Contribute and Excel

Delphi Automotive Systems

DELPHI Automotive Systems

Energy & Engine Management Systems

Chassis Systems



Delco Electronics Systems

Saginaw Steering Systems

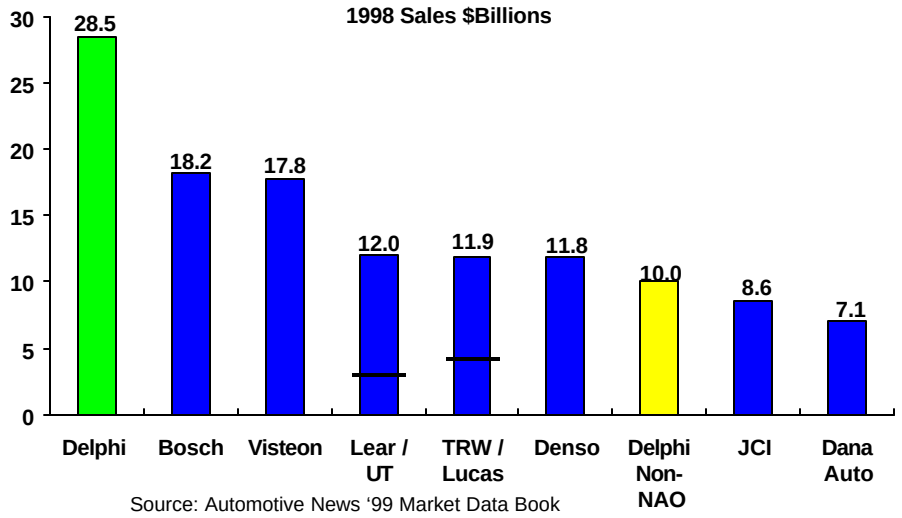
Packard Electric Systems

Interior & Lighting Systems

Harrison Thermal Systems

Comparison To Major Competitors

DELPHI Automotive Systems



Source: Automotive News '99 Market Data Book

Major Customers

DELPHI Automotive Systems

BMW Group	Isuzu	Saab
DaimlerChrysler	Mazda	Suzuki
Daewoo	Mitsubishi	Toyota/NUMMI
Fiat	Nissan	VAZ
Ford	Opel	Vauxhall
GM	Peugeot Citroën (PSA)	Volvo
Honda	Proton	VW Group
Hyundai	Renault	

Delphi Automotive Systems Core Competencies

DELPHI Automotive Systems

- Chassis System Design and Integration
- Mechatronics-Electromechanical Integration
- Friction Management
- Fluid Power Management
- Value Enhancing Processing
- Energy Conversion
- Energy Storage
- Sensing & Actuation
- Exhaust & EVAP Emissions
- Fuel Delivery & Combustion Control

DELPHI Automotive Systems

Delphi and BMW Announce Development of Fuel Cell Auxiliary Power Unit.

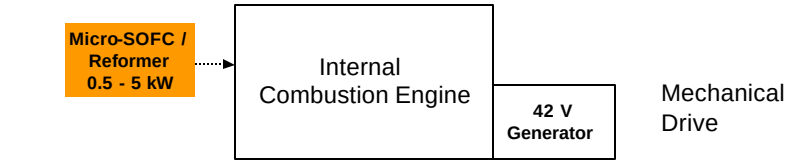
For Release: April 26, 1999

MUNICH, Germany /PRNewswire/ --

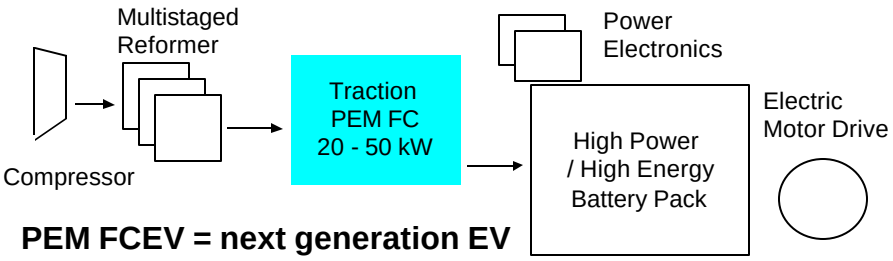
Delphi Automotive Systems (NYSE: DPH) and BMW announced today that they have signed a development agreement to produce vehicles that use a solid-oxide fuel cell as an auxiliary power unit and that have the potential of being clean, high-power-generation vehicles. Under the development agreement, BMW and Delphi are jointly developing a fuel cell system that will be used as an auxiliary power unit for gasoline engines. This will allow BMW to offer more features more efficiently with the potential to reduce the emissions of an internal combustion engine.

Competing visions: Improve ICE or replace it?

DELPHI Automotive Systems



SOFC APU = high efficiency electricity + future vision for integration with ICE



PEM FCEV = next generation EV (with smaller battery pack)

Reforming Methods

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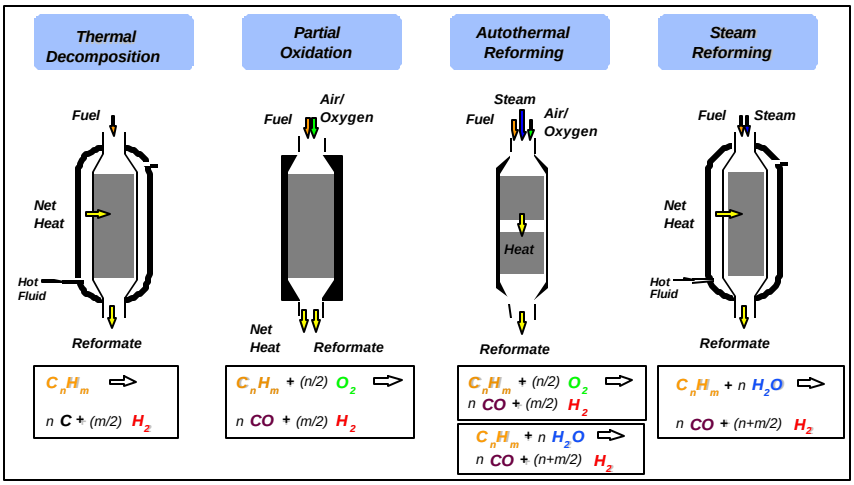

Technical Challenges

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SOFC has many challenges to be viable as an automotive technology:

(1) Cost
(2) Robustness (especially Thermal Cycling)
(3) Anode oxidation sensitivity
(4) Low Fuel Utilization
(5) Thermal Management (high temperature insulation)
(6) System integration (many new technologies)

But:

- **SOFC is an attractive automotive fuel cell technology**
- **It has other future mechanizations which support the trend to nearly-zero toxic emissions and much reduced CO2 emissions**

Cost imperatives by market segment

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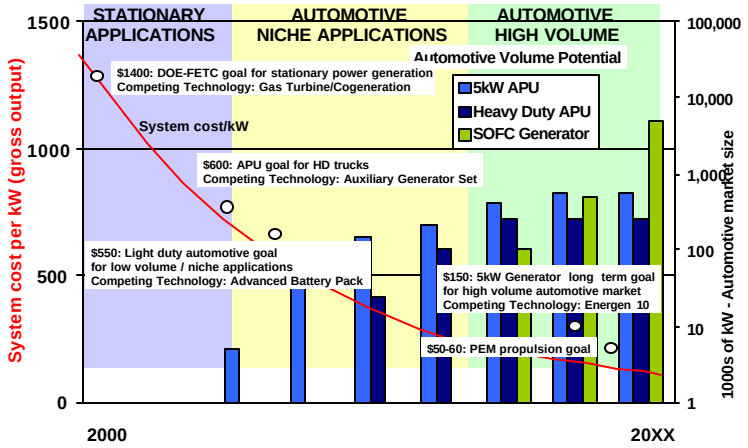

SOFC
Cost development potential

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Further development to achieve cost targets:

- **Internal Reforming**
  - simplification of thermal management, elimination of various balance of plant issues
- **Thermal Control Subsystem**
  - integration (internal reforming, adiabatic wall) and simplification
- **Waste Energy Recovery Subsystem**
  - simplification, possibly elimination
- **Materials**
  - potential to reduce stack material costs up to 80%
  - potential to use metal interconnects
- **System operating temperature**
  - lower system operating temperature leads to less expensive materials in balance of plant subsystems

Delphi interests

DELPHI Automotive Systems

Delphi is interested in leveraging multiple applications

(i.e. military, stationary, portable power and automotive)

in the interest of accelerating technology development.

Three year goals

DELPHI Automotive Systems

– **Fuel Cell Design and Manufacturing objectives**

• Operating Temperature:	750 to 800 °C
• Current Density (stack):	0.5 to 0.7 A/cm^2
• Power Density (stack)	1.75 kW/L
• Normal Operating Voltage (cell)	0.7 to 0.8 V
• Stack Cross Section (cell)	15 x 15 cm
• Production Cost (stack)	$200 / kW

Priority R&D topics

DELPHI Automotive Systems

SUBSYSTEMS / BALANCE OF PLANT

- validation and optimization of stack / reformer in automotive mechanization
- innovation of low cost, high performance high temperature heat exchangers
- cost effective and standardized electrochemical hardware
- robust low cost, high temperature sensors and actuators
- low cost, high performance insulation

MANUFACTURING - processes for high volume production

- integration: optimize total system for fewer and lower cost components
- reliable low-cost processing
- alternative seal designs
- simple, compact internal reformer